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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,704

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Michael S. John

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EXAMINER

PELHAM, JOSEPH MOORE

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,704

Applicant(s)

JOHN ET AL.

Examiner

Joseph M. Pelham

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-37 and 39-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15, 29, 30 and 32 is/are allowed.
- 6) ☒ Claim(s) 16, 18, 28, 31, 33-37 and 39-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/5/03, 11/17/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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The Examiner acknowledges Applicant's submission of the amendment filed 12/5/05. Claims 1-16 and 18-79 are now pending. He notes with chagrin that further review of the claims and prior art have identified new grounds of rejection. The inconvenience is sincerely regretted.

Claim Objections

The claims objected to because of the following informalities: Claim 38 is missing. Appropriate correction is required.

Claim Rejections - 35 USC § 102

Claims 16, 21, 33, 35, 36, 40, 41, 69 are rejected under 35 U.S.C. 102(b) as being anticipated by either U.S. Pat. 5916174 (US'174) or US Pat. 5023783 (US'783).

Referring to col. 1, lines 40-54 (1:40-54), 2:31-55, 5:46-6:18, and 10:3-4, US'174 discloses selecting a digital signal transduced to create a steady-state auditory test stimulus ("long duration pure tones" (5:61, 8:12-34), sensing a potential) while presenting the signal, an "on" and "off" duration, inherently a "maximum time limit," since the test has a finite duration, and analysis of the evoked potentials to detect a response. Since the lack of a response indicates that the test subject did not hear the stimulus, changing the signal so as to render meaningful test results is inherent in US'174. Moreover, changing the test signal in accord with the noise (claim 36) is inherent and unavoidable, since responses associated with excessive noise are not usable test results.

US'783 also discloses selection from a plurality of carrier and modulation frequencies and analyzing the sensed potentials for an "expected steady-state response," which are just the phase-locked steady-state potentials discussed by US'783 (2:11-48).

Claim Rejections - 35 USC § 103

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over US'174 or US'783.

While US'174 or US'783 do not explicitly disclose increasing the intensities of those test signal components which have smaller response amplitudes, to 'normalize' the responses in conformity to the larger, normal response amplitudes, does not patentably distinguish the claimed invention from the prior art. In fact this method is used in vision testing for the purpose of determining the parameters for corrective lenses, the parameters being the amount of correction required to compensate for the deficiencies; hence this would be immediately obvious for the compensation of hearing deficiencies, since hearing tests have precisely the same intent.

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Claims 18, 19, 22-24, 34, 37, 39, 70, and 72-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'174 or US'783 in view of U.S. Pat. 6503207 (US'207).

The claims differ from US'174 or US'783 only in calling for an acoustic stimulus comprising "clicks," automatic or manual control of "on" and "off" durations, and the "off" duration corresponding to a subject recovery period.

US'207 discloses, at 3:57-67, an acoustic stimulus comprising "clicks;" and neither of automatic nor manual signal duration control, nor an "off" duration corresponding to the recovery period can be regarded to patentably distinguish the claimed invention from the prior art. Manual duration control has long been conventional and remains in common use, for instance by the expert practitioner and/or where diverse testing regimes are administered, and automatic control is used where standardized testing regimes are the norm; moreover, it is well known to afford the testing subject a suitable recovery period to minimize the residual effect of a prior test signal; hence such would have been obvious to ordinary skill in the art. It would have been obvious to utilize "clicks" where primarily more basic measures of auditory function or strictly transient responses are desired. Moreover adjusting the time limit in accord with the noise in the response allows selection of a larger sample size, and is the conventional manner of increasing confidence in a test result containing noise.

Claims 20, 55-62, and 71-75... are rejected under 35 U.S.C. 103(a) as being unpatentable over US'174 or US'783 in view of U.S. Pat. 5546956.

The claims differ from US'174 or US'783 only in calling for overlapping evoked responses. However, US'956 discloses that infant audiometry requires stimulus rates resulting in overlapping evoked responses (2:8-22), which would therefore have been obvious to the artisan. As noted immediately above, manual signal duration control, an "off" duration corresponding to the recovery period do not patentably distinguish the claimed invention from the prior art. Manual duration control has long been conventional and remains in common use, for instance by the expert practitioner and/or where diverse testing regimes are administered, and automatic control is used where standardized testing regimes are the norm; and, it is well known to afford the testing subject a suitable recovery period to minimize the residual effect of a prior test signal; hence such would have been obvious to ordinary skill in the art.

Claims 25, 26, 43, 76, and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'174 or US'783 in view of US'207, as applied to claims 18, 19, 22-24, 37, 39, 70, and 72-75 above, and further in view of U.S. Pat. 4622440 (US'440).

The claims differ from US'174 or US'783 in view of US'207 only in reciting the programming of a hearing aid for a specified number of frequency bands, by means of the recited acoustic testing steps (audiometric results), where the gain for each frequency band is a function of the detection of a subject response.

US'440 discloses, at 4:4-26, the programming of a hearing aid for a specified number of frequency bands, by means of audiometric results, where the gain for each

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frequency band is a function of the detection of a subject response. It would have been obvious to program a hearing aid with the test results of US'174 or US'783 since such is in fact the object of such a test, where a hearing aid is medically indicated, and US'440 discloses such integration of programming and testing functions to have been well known.

Claims 27, 28, 78, and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'174 or US'783 in view of U.S. Pat. 5023783 (US'783).

US'174 or US'783 discloses substantially all of the recited subject matter, as discussed above, except noise masking of the test signal by band-pass spectra noise.

US'783, at 8:23-26, discloses noise masking of the test signal by band-pass spectra noise. It would have been obvious to thus mask the test signal to avoid spurious responses, as taught by US'783.

Claims 31, 44-54, 63-68... are rejected under 35 U.S.C. 103(a) as being unpatentable over US'174 or US'783 in view of US Pat. 3970785.

The claims differ substantively from US'174 or US'783 only in reciting iteratively changing the stimulus intensity level to determine a minimal level for a detected response, and either increasing or decreasing signal intensity by steps. However, US'785 discloses such iterative variation of stimulus intensity level to determine a threshold detection level, inherently pausing between steps to allow a recovery period. It would have been obvious to thus carry out a hearing test to efficiently and precisely determined the threshold levels for each given frequency. Moreover, recording the test results in a table is either inherent in US'785 or immediately obvious, since it is the ordinary way to depict the results of 2-parameter tests; and automatic control is conventional and hence obvious for standardized testing regimes. Further, "recording criteria" such as a "time limit" or preexisting subject data would have been obvious since a time limit is inevitable and preexisting subject data is universally considered in medical testing.

Allowable Subject Matter

Claims 1-15, 29, 30, and 32 are allowed.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are in part moot in view of the new ground(s) of rejection. With respect to the substantive limitations of claims 16, 43, and 69, Applicant merely asserts that US'174 does not teach or disclose: "selection from a plurality of different steady-state evoked response tests a test; creation of a test signal having a component selected to evoke a steady-state response consistent with the selected test and analysis of potentials to determine whether there is data indicative of the presence of an expected steady-state response to the stimulus," without addressing the disclosure of US'174.

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In fact US'174 discloses that stimulus types and frequencies are chosen by the test administrator (8:12-34), "creating a test signal... to evoke a steady-state response" (10:3-4), sensing the response while presenting a stimulus, since such is inherent in tests using continuous tone stimuli, and determining the presence of an expected steady-state response (5:62 – 6:18).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph M. Pelham whose telephone number is 571-272-4786. The examiner can normally be reached on M-F 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/13/06

A handwritten signature in black ink, appearing to read 'J. Pelham', is written over the date.